# 2nd Annual EPA Office of Compliance Grant Conference:

# Showcasing Enforcement and Compliance Assurance Results and Sharing Lessons Learned

April 15-16, 2004 Westin Embassy Row Hotel Washington, DC

# GROUP #2: IMPROVING DATA QUALITY AND PUBLIC ACCESS

#### **Presented by**

Tom Hansen, U.S. EPA Region 4 (moderator)
Russ Brodie & Dave Kempson, Arizona DEQ
Melanie Morris, Mississippi DEQ
Pat Hammond, Nebraska DEQ
Melvin Mitchell, Louisiana DEQ

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Co-sponsored by the U.S. EPA and the Environmental Council of the States (ECOS)

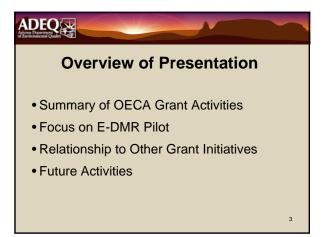
# **Showcasing Enforcement and Compliance Assurance Results and Sharing Lessons Learned**

Russ Brodie

Arizona Department of Environmental Quality



Russ Brodie
Program Manager, Office of Information
Technology, Arizona DEQ



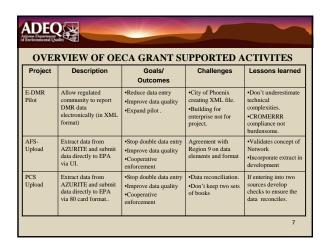
#### **Notes**



#### **Notes**

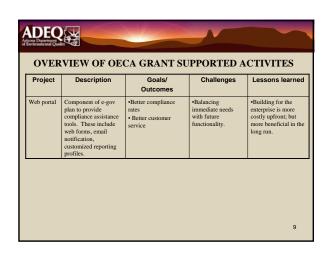
We got great value from our grant funds. For every dollar we get in grants, we get about \$10 in value.

The grant helped us develop our Inspection, Enforcement and Compliance module (ICE)



Case management is one of the biggest benefits to date. Anyone can get lists of enforcement actions.

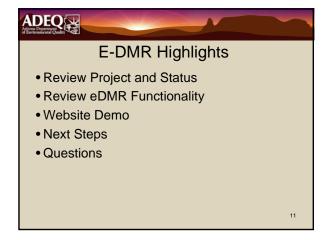
Trying to institutionalize the use of the ICE system. Currently, only 20% of people are using it, their goal is 80%. There is a lack of familiarity. We need more training and more outreach.



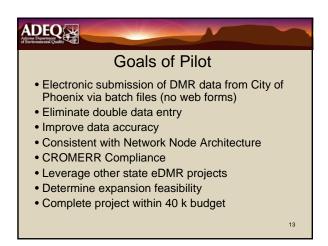
#### **Notes**

All letters of violation are the same, so there is no review, no ambiguous language. It's been a big help.

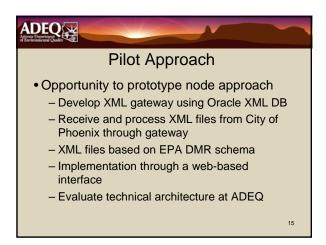
There is agreement on definition of terms. We now have a handbook to standardize that.



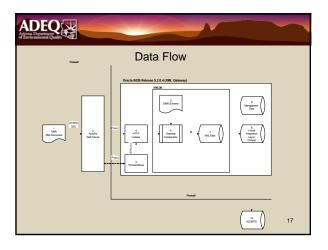
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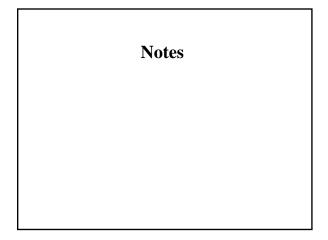


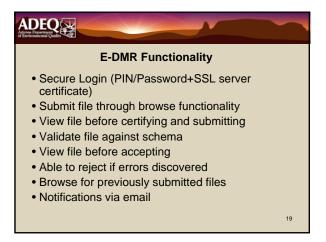
It's a strange project because they didn't want to do it. EPA suggested they do an e-DMR project.

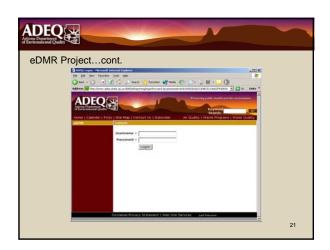












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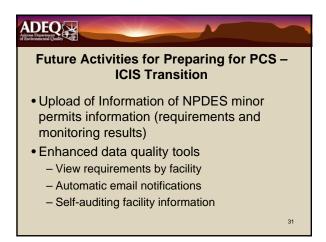


# E-DMR Next Steps • Develop Web Forms for E-DMR as part of Enterprise E-Gov Solution • Web-Forms will be Schema Driven using same process as XML submission • Incorporate Compliance Assistance Tools (smart form approach into web forms) • Challenge is building for enterprise which means delaying E-DMR web forms

**Notes** 

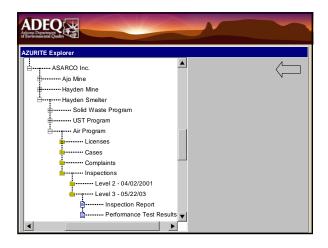
# Relationship to Other Grants Component of E-Gov plan Electronic reporting components follow uniform processes and functionality Data accessible in GIS and Tabular format through gateway Leverages Network Node Data can be easily mapped to schema when schemas become available.

**Notes** 





#### **Notes**

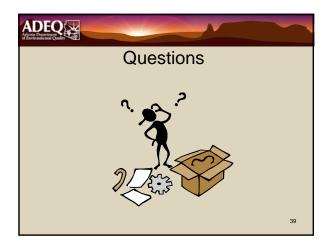


#### **Notes**

AFS upload - can go from AZURITE to AFS and reconcile the data between Region 9 and the Water Program people. Spent a bunch of the grant trying to reconcile the systems.



- enforcement actions.
- Managers can generate reports that show status of every enforcement action in the agency.
- Nothing slips through cracks.
- The information can be sorted by program, sic codes, or corporate identify.
- In future Agency plans to tailor compliance assistance activities on recurring violations.



### **Questions & Answers**

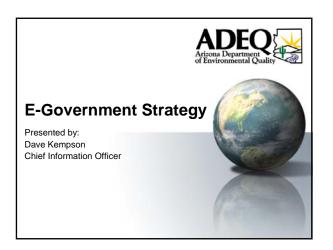
- Q: You listed several activities that were funded by the OECA grant. Was that one
- A: Two
- Q: How do you sustain this?
- A: Most of the ongoing maintenance is indirect spending
- Q. is a sauraone:

  A: All of it is sharable, but operating outside of our environment would be complex.

  But there is no copyright. They are making this available for others to use.
- A: They are not putting any enforcement information out on the web now, so no. Everything is part of the public record unless it was explicitly excluded.

# **E-Government Strategy**

Dave Kempson Arizona Department of Environmental Quality



Dave Kempson, Arizona DEQ

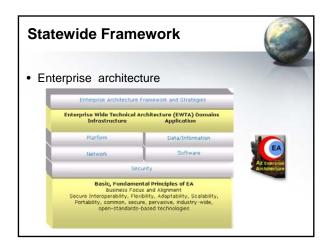
Has been with DEQ for 14 years, was in Air Quality and is now Chief Information Officer

Public access is very pertinent. They have been developing a cross-program internal database and are now starting an e-government initiative about publicly available data.

This presentation will discuss an overview of their strategy



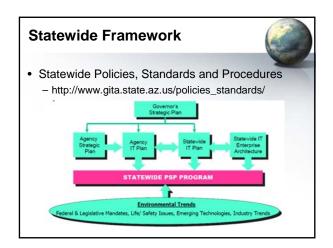
## Notes



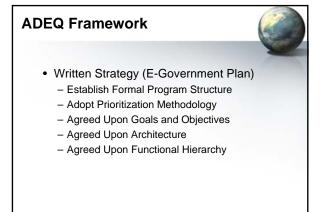
#### **Notes**

They have a government information technology agency – set statewide strategy for Arizona and created the enterprise architecture, which sets a framework under which each agency operates.

Places priorities on interoperability, and statewide policy planning and procedures.



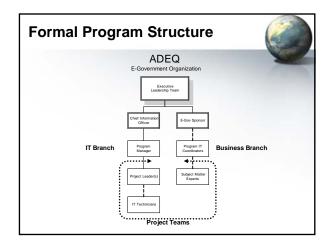
There are statewide policy procedures and standards across the board – both Agency IT plan and Statewide IT plan. For example, when an agency develops a new website there must be common navigation.



#### **Notes**

In ADEQ, they wanted to start with a written plan or strategy.

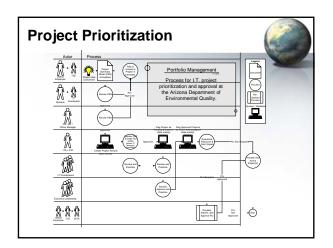
DEQ started with a written plan to develop methodology, agree on goals and objectives and agree on hierarchy.



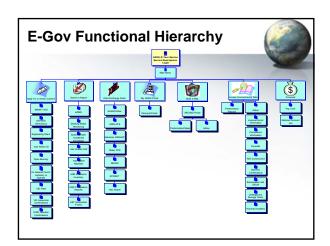
#### **Notes**

From an organizational standpoint they started with an egovernment officer and sponsor.

They made a matrix to evaluate projects and compare them, and then decide what to move forward on. Look at high-level architecture. How will people get information?



They also have implemented a project prioritization methodology to help focus and get the biggest bang for the buck. Helps evaluate projects and compare them to each other.



#### **Notes**

Looked at a high level navigation architecture from a functional perspective

#### **ADEQ Framework**



- Other Key Factors
  - Foundation based upon integrated environmental database.
  - Utilize contractors, but maintain critical knowledge "inhouse"
  - Modular approach utilizing open architecture
  - Single Sign-on
  - Performance
  - Accesibility
  - Security, Security, Security

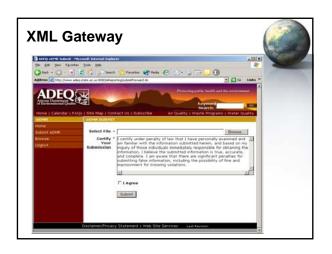
#### **Notes**

System must be based on an integrated environmental database.

They use contractors, but it's not completely outsourced. Use a modular approach and do code reuse.

Single sign-on user has access to the whole system.

Security is paramount.



Focus is on integrated Inspection, Compliance, Enforcement (ICE) application.

Better business processes define how they handle cases, even down to the time frame.

Web-based compliance reporting uses the national center for exchange from the regulated community.

#### **Compliance and Enforcement Aspects**



- Centered on an integrated Inspection, Compliance, Enforcement (ICE) database application.
- Standard Business Practices (http://www.adeq.az.gov/function/forms/docs.html#hand)
- Web Based Compliance Reporting
  - XML
  - WebForms
  - Legacy Formats

#### **Notes**

Also want to give the general public a clean and easy-touse navigation interface.

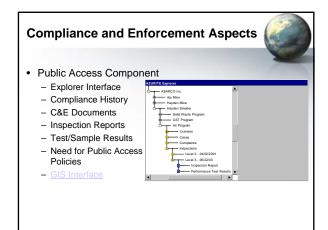
Would allow the user to drill down to details about a facility, i.e, permits, inspection reports, etc.

# Public Access - GIS The state of the state

#### **Notes**

Also want to include a GIS interface, now in prototype. Other states have done this.

Using ESRI's Arc-IMS to allow users to navigate through the state and examine environmental interests.



Compliance assistance component. Tracks compliance efforts. ICE can track most common violations.

Moving from capital to expenditure line of cost.

# Compliance and Enforcement Aspects Compliant Management Component Webform (http://www.adeq.az.gov/function/compliance/

#### Notes

Complaint management – now have a form that allows anyone to submit a complaint. Can call, email, or fax depending on user preference.

Want to soon integrate this with the ICE system so it can be tracked to an enforcement action and resolution

Compliance assistance component is in ICE system now.

#### **Funding Strategies**



- Fees/Appropriations
- · Federal Grants (Base and supplemental)
- Shared Revenue
  - Arizona @ Your Service
  - BRITS
- · "Operating vs Capital"
  - Master Financing
  - Leasing
- Cooperative Ventures
- Supplemental Environmental Projects (SEP)

#### **Notes**

Looked at moving things out of a capital expenditure line and into an operating line.

#### **ADEQ Contacts**



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- Henry Darwin, ADEQ C&E Coordinator
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## Melanie Morris

Mississippi Department of Environmental Quality





ECOS and EPA 2<sup>nd</sup> Annual Grant Conference

# Improving Data Quality and Public Access

Westin Embassy Row Hotel Washington, D.C. April 15 - 16, 2004

#### **Notes**

#### Melanie Morris

Chief, Data Integration Division, Mississippi DEQ

Sharing of information from MS's Insight system to the IDEF system.

They recognized that as they used the Insight system for water data, they would no longer be using PCS. They needed to find a way to share the information with Region 4.



#### Project Overview/Goals

- The Mississippi Department of Environmental Quality (MDEQ) implemented an integrated environmental information management system, enSite, in October 2000.
- With implementation of the water program, MDEQ will no longer utilize PCS as Mississippi's internal data management system.
- The goal of this project is to share more accurate and more comprehensive enforcement and compliance data with EPA by providing information from its enSite System to EPA.

April 15 – 16, 2004

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#### Notes

The goal of the project is to provide information from Insight to PCS, but also to have more accurate information. In order to attain the goal, they needed to modify the water module in the Insight system. A translator had to be developed to get from Insight to PCS. IDEF has been used by some states to write the interface between state systems to PCS and then to ICIS. States are going to have to change their translation software.



#### Attaining the Goal

- Modifications were necessary to MDEQ's water module to support compliance data required by PCS
- Development of translation software to take MDEQ's enSite data to PCS through IDEF/CDX.
  - IDEF provides a single format for the electronic transfer of NPDES data from diverse state systems to PCS
  - IDEF will bridge the gap between Legacy PCS and Modernized PCS (ICIS). It will allow transfer of data to Legacy PCS now and minimize changes needed as a result of modernization

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#### **Notes**

IDEF – Interim Data Exchange Format
Realized that they had to write an interface to PCS, then later to ICIS. Created one system called IDEF, which bridges the gap between PCS and ICIS and will not have to do it twice (again when ICIS comes on board). They have created the software that creates the files to transfer.



#### **Projected Results**

- Burden Reduction, Data Accuracy, Data Completeness, Timeliness of Data
  - Duplicate data entry is eliminated, reducing burden and allowing less room for data entry errors and improving overall data accuracy.
  - Data in enSite is more complete, allowing for more complete data to be transferred to EPA without the additional data entry burden.
  - Data is entered into enSite by permit writers and compliance staff as part of their daily activities, thus data is more timely.

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#### **Notes**

They have accepted the software and are waiting for EPA to be ready and start to transfer data. It will reduce time burden, reduce duplicate data entry, and allow for better data. The data in Insight is more complete. Permit writers and inspectors enter data, making it timelier and more accurate.



#### Leveraging this Project

- TEMPO User's Group
- Share and/or jointly develop enhancements to the TEMPO product
- KY plans to implement MS's water enhancements
- MDEQ project leveraged the NJ IDEF conversion
- Grant funding covered joint design and development of TEMPO to IDEF conversion software for both MS
- Conversion software available to any TEMPO state at no cost
- Lessons learned available to all states

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**Notes** 

States with their own integrated systems flow their data to EPA's FRS. One of the tremendous benefits is the ability to leverage work that is already done. TEMPO is used by several other states, and they now have the opportunity to implement changes. Many states are doing similar things, and much is sharable. For example, KY will implement water enhancements, and grant funding has put the software in place in the two states. Grant funding has allowed them to implement TEMPO in states at no



#### Continuing the Charge

- MDEQ's 2002 Network Readiness Grant provides for implementation of MDEQ facility data to FRS
- MDEQ and 4 other TEMPO states received an 2002 Network Challenge Grant to develop the data flows over The Exchange Network from each state TEMPO implementation to RCRAInfo and NEI
- MDEQ received a 2003 OECA Grant to develop the data flow from enSite/TEMPO to AFS through the AFS Universal Interface. This software will be shared with other TEMPO states.
- MDEQ has applied for a 2004 Network Implementation Grant that will provide for flowing Beach Data to EPA's STORET System.

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#### **Notes**

Continuing challenges: States with their own integrated systems or media programs got a grant in 2002 for Exchange Network.

Flowing facility data received 2003 OECA AFS grant and will be shared with other TEMPO states. Applied for 2004 network implementation grant. Very interested to moving to node for AFS. EPA funding is critical to getting data systems in line.

## **Notifications of Environmental Concern**

Pat Hammond

Nebraska Department of Environmental Quality

#### Notifications of Environmental Concern



Nebraska Department of Environmental Quality

#### **Notes**

Pat Hammond

Applications Developer Lead - Office of Information Technology, Nebraska DEQ

Nebraska is a small state with a small budget
One role of an environmental agency is to receive and respond
to citizen reports of environmental concerns

NDEQ calls these 'complaints' but are starting to call them 'notifications of environmental concern'



#### **Grant Project**

"Improved Public Access to Complaints and Enforcement Actions"

#### **Notes**

The grant was intended to improve access to complaints and enforcement actions.

The hope was to spotlight problems at a facility, and that increased public pressure would encourage facilities to make changes.



#### The Problems

- Field office staff used multiple complaint protocols
- Operational "bottlenecks" when few people received complaints
- Complaints "fell through the cracks"

#### **Notes**

The Agency was having trouble managing complaints, partly due to reduced staffing levels. Each field office person investigates complains for different regulatory offices, and everyone had his or her own forms. Sometimes complaints fell through the cracks, causing political and environmental problems.



#### **Objectives**

- Uniform complaint form for the agency
- Centralized database of all complaints received
- Public access to complaints
- Direct public access to key enforcement documents

#### **Notes**

To address these problems, they devised a uniform complaint form and put these complaints in a publicly accessible database.

The public could also review key enforcement documents.



#### **Complaint Team**

- Reviewed existing complaint forms
- Agreed on data elements to track
- Recommended "Complaint Coordinator" position

#### **Notes**

The Complaint Coordinator ensures that each incoming complaint is handled appropriately.

The Complaint Team was formed. Team members looked at systems from other states and examined the system.



#### Concurrent Initiatives

- Complaint Team
- LUST/RA Application Development
- Unsolicited Environmental Assessment Work Group

#### **Notes**

In developing the application, it became clear that similar types of information were being collected but stored in different places.

After looking at the systems, they identified the overlap. To improve the quality of the system the notification will encompass water quality.



#### Types of Notifications

- Complaints
- Surface Spills
- Fish Kills
- AST / UST Releases
- Unsolicited Environmental Assessments

#### **Notes**

Here the complaint tracking became "notifications of environmental concern"

Notifications are combined with facility info and document tracking. These notifications will go into these other data systems. They are testing the system, after which it will be released internally. After it is tested internally it will be uploaded on the website.



#### **Notification Referrals**

- Internal NDEQ programs
- Other state agencies
- Federal agencies
- Local agencies

#### **Notes**

User will see a log of notifications that have come into the Agency. Status of the notification and other information will be available.

A user will select a notification and will see a business or facility that was involved. The right hand side of the screen shows who caused the problem.



#### Data Standards

- Lakes and Streams (NDEQ Surface Water Quality Standards)
- NDOR Roads Database
- EPA Substance Registry System

#### **Notes**

To improve the quality of the system, we use existing data from appropriate sources for different types of notifications

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#### Integrate with Existing Systems

- Facility Information
- Document Tracking

#### **Notes**



#### **Phases of Deployment**

- Receive and refer notifications
- Link documents to notification issues, including investigation and enforcement documents
- Release on the web for public access

#### **Notes**

Contractors have delivered the notification system, and they are currently testing it. They still need to implement changes to their document tracking system, and they will soon be indexed to notifications.

Will ultimately be deployed on the web for public access.

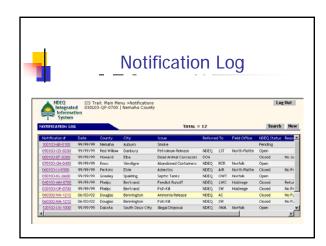


#### **Application Demo**

#### **Notes**

(showed demo)

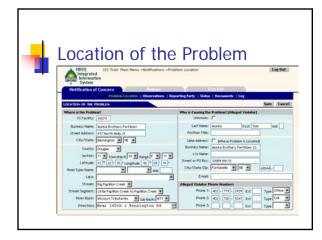
The first thing you see is a log of all the notifications that have come into the agency, categorized by type of issue.



Status screen indicates how the notification came in and showed other agencies that were notified.

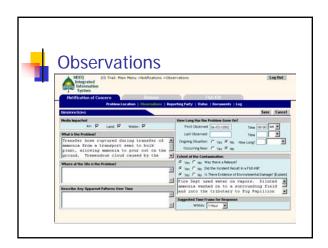


#### **Notes**



#### **Notes**

This screen shows the location of the problem, expressed several different ways.

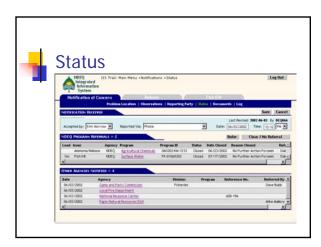


Observations capture information about exactly what happened and how bad the contamination is.

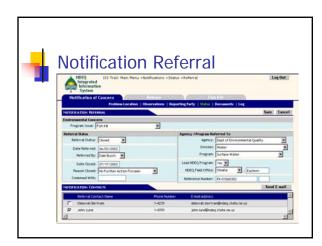
Status indicates who at the agency received the notification, how they were notified, and the date.







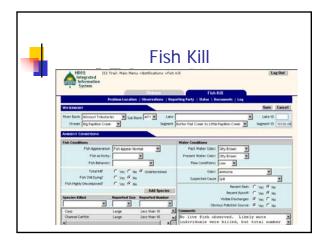
#### **Notes**





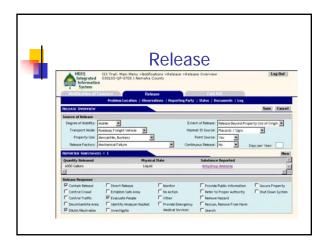


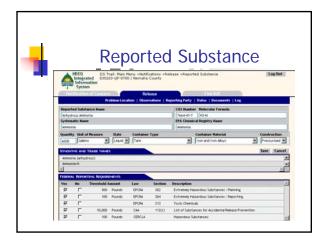




Fish kill screen, if applicable. If it involved a release, screen shows the substances that were released. They think that the notification database will have many benefits.

They have not yet made a decision about what will appear on the web. Not sure whether it will be just notifications or notifications that are legitimate or have been investigated.





#### **Notes**



### Summary of Features

- Central repository of notifications
- Anyone can receive and refer issues
- Notification status is available to everyone
- Notifications are linked with existing facility information
- Uniform data provides better understanding of citizen notifications

#### **Notes**

There is a distinction between compliance activities and notifications.

Each program is going to have to decide what the criteria are for closing a notification. When a notification comes in it can go to multiple agencies and then get closed by multiple agencies.



#### **Expected Benefits**

- Improve public access to compliance information
- Improve quality of data through increased public scrutiny
- Improve compliance through stigma of appearing on agency website

#### **Questions & Answers**

- Q: In order for a party to appear on your web site, do they have to go through the whole process, or only have a notification against them?
- A: That's a good question; we're not sure. We will determine that after it's tested and we see how it works.
- Q: How does the investigation tracking field work?
- A: Investigations are handled apart from the notifications tracking.

#### **Questions & Answers**

- Q: Did you have any trouble establishing what constitutes closure?
- A: Yes, some. Each program will have to decide for itself. Also, a notification can be referred out to different programs.

## Melvin Mitchell

Louisiana Department of Environmental Quality

#### **LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**



"Development of an EPA AIRS(AFS) Interface with TEMPO"

M. C. Mitchell, Project Manager (225) 219-3931 Room Number 731

#### **Notes**

Melvin Mitchell Senior Scientist, LA DEQ

## LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY Plopment of an EPA AIRS(AFS) Interface with TEMPO"

#### **Project Description:**

Air/AFS Data...68(+/-) Data Elements (MDR&PPDE) + Into AFS via an electronic translator

- + August 2003 to Mar 2004
- + LDEQ Contract Funding Source; EPA GRANT
- + Contractor Using ORACLE 9i/DISCOVERER
- + TEMPO Changes/Clean-up included
- + Stake holders Input requirements
- + OEC, LDEQ Will Upload/Download/Crossload and Q/A Data on recurring basis

TO BE OPERATIONAL **MARCH 26, 2004** 



#### **Notes**

They identified data elements, using the grant in Louisiana.

Moving data from their system, TEMPO, to AFS

AFS data, 64 data elements (Title V), need to get out of TEMPO and into the national system

They had the benefit of being able to clean the data. LA purchased TEMPO in 1999.

Decided to use the full capabilities and use the AFS data. Data problems were a constant concern. Universal Interface was used to transfer data.

# LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY "Development of an EPA AIRS(AFS) interface with TEMPO" CTAS Custual Number 39845, OCK Centrad Number 455

### $\frac{LDEO\ Stakeholders/Participants}{The\ Undersecretary/CIO}:$

Enforcement Division, Program Manager, OEC TEMPO Masterfile Maintenance Division, Supervisor, OES Permits Data Engineer - TEMPO

Surveillance Division Scientist, OEC Permits Division (Air) Engineer, OES Engineering Division Engineer, OEA Information Div Supervisor, OMFB Information Tech Div Project Leader, IS/OUS Certification Div Env Manager, OEA

**Contractors:** Methods Tech Solutions Inc



#### **Notes**

Stakeholders were identified, and key people were the permit writers. This process involved people from throughout the department.

#### WHAT HAVE WE DONE?

- ✓ COMPLETED MAPPING OF 4 OF 4 UI PROGRAM AREAS
  - -PLANT GEN, AIR PROG, POLLUTANT, ACTION
  - -68 of 68(+/- 1) REQUIRED ELEMENTS\* MAPPED
  - -FINAL TESTING/  $1^{st}$  draft SOP, dtd Jan 7, 2004
- ✓ CONDUCTED 32 OF 38 STAFF COORDINATION MTG - MINUTES/NOTES AVAILABLE
  - MUCH HAS BEEN DONE/LOTS OF TASKERS
  - TEMPO MORE ROBUST/INCLUSIVE
- ✓ CONTACTED FOR INFORMATION/COORDINATION
  - UNIV INTERFACE CONTRACTOR-Data Vision
  - AFS PROGRAM MGR/ASST/SEC MANAGER

  - AFS PRIMARY CONTRACTOR-TRC REGION VI AFS STAFF
- ✓ DEVELOPED 237 DATA QA/QC WORKBOOKS
  - CORRECTED/UPDATED > 501,667 AFS/CDS/TEMPO RECS

There are four program areas.

They conducted 38 meetings to work through all that needed to be done. TEMPO is now more robust and inclusive than it was before.

**Notes** 

Their UI produces workbooks for QA/QC checks, 237 in all. They have updated over 500,000 records.

The AFS people were also involved in the process and very helpful.

#### **SOME HIGH POINTS!!!!**

- \* CLEANED-UP TEMPO/CDS/AFS
- \* SYNCHRONIZED TEMPO/CDS/AFS
- \* TEMPO CONTAINS REQUIRED DATA FIELDS
- \* TEMPO READY FOR AFS MODERNIZATION
- \* TEMPO MEETS NATIONAL/REGIONAL RQMTS
- \* ALL MANDATORY/DESIRED DATA INCLUDED!!
- \* LDEQ CODES DIRECTLY INTO AFS 6/1/03
- \* LDEO DISCONTINUED CDS 11/30/03
- \* 1ST SUCCESSFUL TEST FEBRUARY 24, 2004
- \* INTERFACE OPERATIONAL MAR 29, 2004 It w
- \* 1st OFFICIAL UPLOAD -

**APRIL 1, 2004** 



#### **Notes**

This improved AFS also. Only needed to make four changes. Everything else was there.



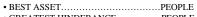
#### **Notes**

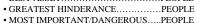
Too many people handling data reduce quality!

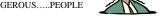
It works – have synchronized the state data and the national data.

#### LESSONS LEARNED

WHAT YOU ASKED ME TO BRING







 $Strategy\ 1-Motivate... Make\ useful/easier.. Include\ all... Give\ ATTABOYs.$ 

- •Strategy 2 Isolate ....Focus/Priority on Mandatory Data & Events
- •Strategy 3 Initiate..Start quick/limit codes/Easy SOPs/Manuals w/ Pix
- •Strategy 4 Coordinate...Use the UI.....Ensure MDR/PPDE are Present
- •Strategy 5 Validate...QA/QC...State vs. AFS ..Not identical..
- •Strategy 6 Duck!!! Look for data lags/gaps...need "man in the loop"
- •Strategy 7 Stay low!!!!! Anyone can mess w/data...Any part can blow... At Anytime



